

CLAIMS

1. Hub for the rotor (22) of a wind energy turbine (10) comprising
 - a hollow body (28) rotatable around a rotation axis and provided with at least one flange (34) for mounting to the hollow body (28) a bearing for a rotor blade (26) and
 - at least two stiffening webs (38) integrally formed with the hollow body (28) and radially extending within a flange area (36) of the hollow body (28) surrounded by the flange (34) to the center (40) of the flange area (36),
 - wherein at least two openings are provided within the flange area (36) of the hollow body (28).
2. Hub according to claim 1, wherein the stiffening webs (38) are homogeneously distributed within the flange area (36) and are displaced relative to each other by an angle substantially equal to 360° divided by the number of the stiffening webs (38).
3. Hub according to claim 1 or 2, wherein at least one of the stiffening webs (38) extends substantially parallel to the rotation axis of the hollow body (28).
4. Hub according to any one of claims 1 to 3, wherein the width or the thickness or both of the stiffening webs (38) decreases towards the center (40) of the flange area (36).
5. Hub according to any one of claims 1 to 4, wherein the stiffening webs (38) are solid or hollow.
6. Hub according to any one of claims 1 to 5, wherein at least one of the stiffening webs (38) is provided with an aperture (42) for a rotor shaft

(20) of a driving means for rotating a rotor blade (26) when mounted via the bearing to the flange (34).

7. Hub according to claim 6, wherein the width or thickness or both of the at least one stiffening web (38) is increased within the area of the aperture (42).
8. Hub according to any one of claims 1 to 7, wherein the stiffening webs (38) are arranged within a plane tilted with respect to the rotation axis of the hollow body (28).
9. Hub according to any one of claims 1 to 8, wherein the stiffening webs (38) are arranged in at least two sets of at least two stiffening webs (38) and wherein the two sets of stiffening webs (38) are displaced along a rotor blade (26) pitch axis (46) perpendicular to a plane defined by the flange (34).
10. Hub according to claim 9, wherein the stiffening webs (38) from set to set are displaced to each other around the rotor blade (26) pitch axis (46).
11. Hub according to any one of claims 1 to 10, wherein the number of stiffening webs (38) is three or four.
12. Hub according to any one of claims 1 to 11, wherein the hollow body (28) comprises at least two and preferably three flanges (34) each defining a flange area (36) and wherein each flange area (36) is provided with at least two stiffening webs (38) with the shape, number, and/or arrangement of the stiffening webs (38) within each flange area (36) being identical or different.
13. Hub according to any one of claims 1 to 12, wherein the hollow body (28) comprises a first end (30) for mounting to a rotor shaft (20) and a

second end (32) opposite to the first end (30) and wherein the hollow body (28) within areas between adjacent flanges (34) and its first or second end (32) or both ends is provided with additional apertures (44).

14. Hub according to claim 13, wherein the hollow body (28) in case of comprising three flanges (34) is provided with three additional apertures (44) adjacent its first and second ends (30,32).
15. Hub according to any one of claims 1 to 14, wherein the hollow body (28) comprises a first end (30) for mounting to a rotor shaft (20) and a second end (32) opposite to the first end (30) and wherein the hollow body (28) at its first and/or second end (30,32) comprises a hole (42).
16. Hub according to claim 15, wherein the hollow body (28) at its second end (32) comprises a deepened area (50) with a man hole (48) located therein.